15-1000 Cover Crop Education and Demonstration Project for the Bayou Bartholomew Watershed
Key Personnel

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Bayou Bartholomew Watershed

Data source: GeoStor
Map Created: March 2011

0 3.757.5  15 Miles

UTM NAD83
Zone 15N

University of Arkansas System
What If the World’s Soil Runs Out?

A broken food system is destroying the soil and fuelling health crises as well as conflicts, warns Professor John Crawford of the University of Sydney.

By World Economic Forum | Dec. 14, 2012 | 31 Comments

This is a “what if” interview from the World Economic Forum’s Risk Response Network. To view the rest of the series, click here.

It’s a strange notion, but some experts fear the world, at its current pace of consumption, is running out of useable topsoil. The World Economic Forum, in collaboration with TIME, talked to University of Sydney professor John Crawford on the seismic implications soil erosion and degradation may have in the decades to come.

Is soil really in danger of running out?

A rough calculation of current rates of soil degradation suggests we have about 60 years of topsoil left. Some 40% of soil used for agriculture around the world is already eroded, and a further 33% is in poor condition. The United Nations predicts our demand for food will grow 70% by 2050, and the International Fund for Agricultural Development estimates the global food system will need 64% more land to produce the food we’ll need by then. A majority of it will have to be topsoil, which is the most fertile layer of soil that helps hold vital nutrients. So what’s the solution?

Getty Images
Sediment is the largest single nonpoint source pollutant and the primary factor in the deterioration of surface water quality.
Turbidity

Low Turbidity

Clear

High Turbidity

Murky
Arkansas Erosion Rates

Tons of Water (Sheet & Rill) Erosion on Cropland, 1982 to 2012

Water Erosion

Water (Sheet & Rill) Erosion Rates on Cropland, 1982 to 2012

Rate in Tons per Acre per Year
Bayou Bartholomew Project Goals

• Increase Cover Crop Adoption in the BB Watershed!
  – Demonstration
  – Education
  – Workshops
  – Surveys

• Education is key! Many of these producers do not realize a problem even exists!
Advisory Committee

- Jeremy Ross- Extension Soybean Specialist
- Jason Kelley- Extension Small Grains Specialist
- Tony Ramick- ANRC Staff
- Mike Daniels- Extension Water Quality
- John Lee- NRCS Staff
- Keith Perkins- Lonoke County Agent
- Tim Smith- Southern Soil Solutions
- Robby Bevis- Producer
- Adam Chappell- Producer
Advisory Committee Role

• Expertise
• Provide guidance on program planning
• Help with Producer Workshops
• Help develop Producer Survey

• Provide **HONEST** feedback on areas of improvement - Education and Demonstration
Producer Survey

• Gain information on producer demographics

• Learn more about primary tillage and crop management practices

• Identify producer’s knowledge level and perception of cover crops
Management Plans are Critical

Choose Summer Crop First

Select Desired Benefits

Choose Cover Crop Species

Soybean

Reduce Erosion/Weed Suppression

Cereal Cover Crop (Cereal Rye, Winter Wheat)

Rice/Corn

N Credits/Erosion Control

Legume Cover Crop or Cover Crop Blend

UofA DIVISION OF AGRICULTURE RESEARCH & EXTENSION
University of Arkansas System
Locations for 2015-2016
Locations for 2015-2016
Locations for 2015-2016

• Late Start- Poor Results!
  – Project Started Oct. 1\textsuperscript{st}
  – Seed Ordered Oct. 20\textsuperscript{th}
  – Rain, Rain and more Rain
  – Planted last week of November

• Poor Cover Crop emergence

• Poor Plant Stands
Locations for 2016-2017
Cover Crop Workshops

• ½ Day Workshops to Educate Producers on benefits of cover crops (1 in both Lincoln and Jefferson Co.)
  – Introduce problem (Erosion)
  – Successful cover crop selection and management
  – Concerns with implementing cover crops
  – Success Stories (Robby and Adam)
JEFFERSON COUNTY
Cover Crop Field Tour

March 1st 8:30 AM
Simmons Bank Parking Lot
101 Choctaw Ave.
(Just off Hwy 11 near Hwy 65 Intersection)
Grady, AR

Agenda:
8:30 Welcome
9:00 Johnny McGraw Field
33°58'20.32"N 91°42'24.66"W
9:45 Lee Bryant Field
34°8'58"N 91°49'56"W
10:30 Chad Render Fields
34°11'28.7"N 91°50'54.1"W
11:15 Wes McNulty Fields
34°19'13.35"N 92°1'28.90"W
12:15 Lunch- Wes McNulty Shop
4391 S McKinney Rd, Sherrill AR

E-Mail Attendance for lunch count by
February 27th to:
djames@uark.edu
(please include name and affiliation)
Future Plans

• Currently awaiting harvest on one of the fields and yield data on another

• Plan ½ day workshops in both Jefferson and Lincoln County to give overview of projects
  – Producer led presentations on their individual experiences
  – Educational presentations specific to producer interests
Questions?